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10/501,513	02/07/2005	Mats Sagfors	P15287-US1	4394
27045	7590	11/25/2009		
ERICSSON INC. 6300 LEGACY DRIVE M/S EVR 1-C-11 PLANO, TX 75024			EXAMINER  SHEDRICK, CHARLES TERRELL	
			ART UNIT	PAPER NUMBER
			2617	
			MAIL DATE	DELIVERY MODE
			11/25/2009	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/501,513

**Applicant(s)**

SAGFORS ET AL.

**Examiner**

CHARLES SHEDRICK

**Art Unit**

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 August 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 50-53, 55-60, 62 and 63 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 50-53, 55-60 and 62-63 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB06)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 50-53, 55, 57-60 and 62 are rejected under 35 U.S.C. 102(b) as being anticipated by Grube et al., US Patent No.: 5,583,869, hereinafter, 'Grube'

Consider **claim 50**, Grube teaches a method of channel resource allocation in a wireless communications system(e.g., **method illustrated in figures 2-4**), said method comprising the steps of: sniffing one or more data transmissions to or from a data provider for information within one or more application-level data packets(i.e., **the controller 108 monitors message transfer as noted in at least -col. 2 lines 66-col. 3 line 4, col. 4 lines 66-67, col. 8 lines 65-67**), the information being related to application-level data object size (i.e., **message length or any other parts of the message (e.g., grade of service etc.) which is hereby interpreted as at least 'related' as noted in at least figure 1, col. 5 lines 7-12 and 47-50**); and allocating radio resources as a function of said data object size(e.g., **a wireless communication resources as noted in at least abstract, figure 2 element 203 and figure 4, col. 3 lines 25-27 and 55-60**), wherein said step of allocating radio resources comprises the step of predicting a future data rate

from the information related to data object size (e.g., **resources are allocated based on needs at time  $t + 0$  which involves increasing throughput rate as noted in col. 6 lines 15-16 which is further based on/proportional to the predicted message completion time as noted in figures 2 and 3** ).

Consider **claim 57**, Grube A system for channel resource allocation in a wireless communications system, said method comprising: means for sniffing one or more data transmissions to or from a data provider for information within one or more application-level data packets(i.e., **the controller 108 monitors message transfer as noted in at least -col. 2 lines 66-col. 3 line 4, col. 4 lines 66-67, col. 8 lines 65-67**), the information being related to application-level data object size(i.e., **message length or any other parts of the message (e.g., grade of service etc.) which is hereby interpreted as at least ‘related’ as noted in at least figure 1, col. 5 lines 7-12 and 47-50**); and means for allocating radio resources as a function of said data object size(e.g., **a wireless communication resources as noted in at least abstract, figure 2 element 203 and figure 4, col. 3 lines 25-27 and 55-60**), wherein said means for allocating radio resources comprises means for predicting a future data rate from the information related to data object size(e.g., **resources are allocated based on needs at time  $t + 0$  which involves increasing throughput rate as noted in col. 6 lines 15-16 which is further based on/proportional to the predicted message completion time as noted in figures 2 and 3** ).

Consider **claims 51 and 58 and as applied to claims 50 and 57**, Grube teaches wherein said step of allocating radio resources comprises the step of selecting one or more channel characteristics (e.g., **scheduling of timeslots and shared usage of available resources –figure 3 –element 303 and col. 3 lines 33-39**).

Consider **claims 52 and 59 and as applied to claims 50 and 57**, Grube teaches wherein said one or more data transmissions are sniffed in an uplink direction (**i.e., inbound and outbound traffic corresponds to monitoring traffic on the uplink and downlink based on the outbound and inbound transmission-see outbound and inbound resource allocation noted col. 3 lines 33-53**).

Consider **claims 53 and 60 and as applied to claims 50 and 57**, Grube teaches wherein said one or more data transmissions are sniffed in a downlink direction(**i.e., inbound and outbound traffic corresponds to monitoring traffic on the uplink and downlink based on the outbound and inbound transmission-see outbound and inbound resource allocation noted col. 3 lines 33-53**).

Consider **claims 55 and 62 and as applied to claims 51 and 58**, Grube teaches wherein said channel characteristics are selected from the group consisting of: data rate; dedicated or shared usage; scheduling; modulation; spreading code spreading factor; and transmission power(**e.g., scheduling of timeslots and shared usage of available resources –figure 3 – element 303 and col. 3 lines 33-39**).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 56 and 63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grube et al., US Patent No.: 5,583,869, hereinafter, 'Grube' in view of Heller US Patent Pub. No.: 2003/0043844 A1.

Consider **claims 56 and 63 and as applied to claims 50 and 57**, Grube teaches the claimed invention except, wherein one or more of said application-level data packets are cached prior to being transmitted using said radio resources.

However, in analogous art, Heller teaches wherein one or more of said application-level data packets are cached prior to being transmitted using said radio resources (i.e., **packets are**

**stored in cache and upon release transmitted over wireless link as noted in at least paragraph 0033 – see also at least figures 2 and 6 and paragraphs 0031-0032).**

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Grube to include wherein one or more of said application-level data packets are cached prior to being transmitted using said radio resources for the purpose of optimizing the wireless link and data transmissions as taught by Heller.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHARLES SHEDRICK whose telephone number is (571)272-8621. The examiner can normally be reached on Monday thru Friday 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid can be reached on (571)-272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/Charles Shedrick/  
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